

## CLAIMS

What is claimed is:

- 1 1. A pellicle device comprising:
  - 2 a base to align with a photomask;
  - 3 a pellicle to slide relative to the base between a first position overlying the
  - 4 photomask and a second position not overlying the photomask; and
  - 5 a transport element to move the pellicle.
  
- 1 2. The pellicle device of claim 1, wherein the pellicle comprises at least one shutter  
2 to open and close.
  
- 1 3. The pellicle device of claim 1, wherein the pellicle comprises a securing  
2 mechanism to maintain the pellicle overlying the base when the pellicle is in the first  
3 position.
  
- 1 4. The pellicle device of claim 3, wherein the securing mechanism uses at least one  
2 magnetic field.
  
- 1 5. The pellicle device of claim 4, wherein the securing mechanism comprises an  
2 electromagnet to produce the at least one magnetic field.
  
- 1 6. The pellicle device of claim 4, wherein the securing mechanism further comprises  
2 an outrigger element within the at least one magnetic field.

1      7.     A pellicle device comprising:  
2            a base to align with a photomask;  
3            a retractable pellicle to move pivotlessly relative to the base between a first  
4   position overlying the photomask and a second position away from the photomask; and  
5            a transport element to move the pellicle.

1      8.     The pellicle device of claim 7, wherein the transport element comprises at least  
2   one arm member coupled to the pellicle.

1      9.     The pellicle device of claim 7, wherein the pellicle does not contact the base in  
2   the second position.

1      10.    The pellicle device of claim 7, wherein the pellicle moves along an axis with  
2   respect to the base.

1      11.    The pellicle device of claim 7, wherein the pellicle comprises at least one shutter  
2   to open and close.

1      12.    The pellicle device of claim 7, wherein the pellicle comprises a securing  
2   mechanism to maintain the pellicle overlying the base when the pellicle is in the first  
3   position.

1      13.    The pellicle device of claim 7, wherein the pellicle is opaque to photolithographic  
2   radiation.

1      14.    The pellicle device of claim 7, wherein a portion of the pellicle is transparent to  
2   inspection radiation.

1    15.    A pellicle device comprising:  
2                a base to align with a photomask;  
3                a pellicle to move about a vertical axis relative to the base between a first position  
4                overlying the photomask and a second position not overlying the photomask; and  
5                a transport element to move the pellicle.

1    16.    The pellicle device of claim 15, wherein the pellicle comprises a securing  
2                mechanism to maintain the pellicle overlying the base when the pellicle is in the first  
3                position.

1    17.    The pellicle device of claim 16, wherein the securing mechanism uses at least one  
2                magnetic field.

1    18.    A pellicle device comprising:  
2                a base to align with a photomask;  
3                a pellicle diaphragm, coupled to the base, having a closed position to cover the  
4                photomask and having an open position to uncover the photomask.

1    19.    The pellicle device of claim 18, wherein the pellicle device further comprises a  
2                transport element coupled to the pellicle diaphragm to open and close the pellicle  
3                diaphragm.

1    20.    The pellicle device of claim 18, wherein the base and the pellicle diaphragm form  
2                a protective enclosure around the photomask.

1       21. A pellicle device comprising:  
2           a base to align with a photomask;  
3           a pellicle comprising two or more shutters to move relative to the base between a  
4       first position overlying the photomask and a second position not overlying the  
5       photomask; and  
6           a transport element to move the pellicle.

1       22. The pellicle device recited in claim 21, wherein the wavelength of the  
2       photolithographic radiation is within the range of 2 to 200 nanometers.

1       23. The pellicle recited in claim 21, wherein the photolithographic radiation is from  
2       the group consisting of ultraviolet, deep ultraviolet, extreme ultraviolet, X-ray, electron  
3       beam, and ion beam.

1       24. A method comprising:  
2           covering a photomask with a retractable pellicle; and  
3           pivotlessly retracting the pellicle away from the photomask to uncover the  
4       photomask.

1       25. The method recited in claim 24, wherein the pellicle is retracted along one axis.

1       26. The method recited in claim 24, wherein the pellicle is retracted to irradiate the  
2       photomask with photolithographic radiation.

1       27. The method recited in claim 26 and further comprising:  
2           replacing the pellicle when not irradiating the photomask with photolithographic  
3       radiation.

1    28.    The method recited in claim 27, wherein the pellicle is coupled to a transport  
2    element, the method further comprising:  
3                 retracting and replacing the pellicle using the transport element.

1    29.    The method recited in claim 24, wherein the wavelength of the photolithographic  
2    radiation is within the range of 2 to 200 nanometers.

1    30.    The method recited in claim 24, wherein the photolithographic radiation is from  
2    the group consisting of ultraviolet, deep ultraviolet, extreme ultraviolet, X-ray, electron  
3    beam, and ion beam.

1    31.    A method comprising:  
2                 covering a photomask with a pellicle that is pivotable about a vertical axis; and  
3                 pivoting the pellicle away from the photomask to uncover the photomask.

1    32.    The method recited in claim 31, wherein the photomask is uncovered to irradiate  
2    the photomask with photolithographic radiation.

1    33.    The method recited in claim 31 and further comprising:  
2                 replacing the pellicle when not irradiating the photomask with photolithographic  
3    radiation.

1    34.    The method recited in claim 31, wherein the pellicle is coupled to a transport  
2    element, the method further comprising:  
3                 pivoting and replacing the pellicle using the transport element.

1    35.    A method comprising:  
2                 covering a photomask with a pellicle comprising two or more shutters; and  
3                 opening the shutters to uncover the photomask.

1    36.    The method recited in claim 35, wherein the photomask is uncovered to irradiate  
2    the photomask with photolithographic radiation.

1    37.    The method recited in claim 35 and further comprising:  
2                 closing the shutters when not irradiating the photomask with photolithographic  
3                 radiation.

1    38.    The method recited in claim 35, wherein the shutters are coupled to a transport  
2    element, the method further comprising:  
3                 opening and closing the shutters using the transport element.

1    39.    A method comprising:  
2                 covering a photomask with a pellicle comprising a diaphragm; and  
3                 opening the diaphragm to uncover the photomask.

1    40.    The method recited in claim 39, wherein the photomask is uncovered to irradiate  
2    the photomask with photolithographic radiation.

1    41.    The method recited in claim 39 and further comprising:  
2                 closing the diaphragm when not irradiating the photomask with photolithographic  
3                 radiation.

1    42.    The method recited in claim 39, wherein the diaphragm is coupled to a transport  
2    element, the method further comprising:  
3                 opening and closing the diaphragm with the transport element.